



03500.010530.5

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
KIYOFUMI SAKAGUCHI, ET AL.) Examiner: Not Yet Assigned
Application No.: 10/085,046) Group Art Unit: 2813
Filed: March 1, 2002)
For: PROCESS FOR PRODUCTION)
OF SEMICONDUCTOR)
SUBSTRATE)
September 5, 2002

Commissioner for Patents
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO-1449.

Applicants note that inclusion of documents in this statement does not constitute a representation that these documents are prior art. Moreover, Applicants wish to point out they have cited the references listed on the face of Matsushita, U.S. 5,811,348, Tayanaka 6,107,213 and Tayanaka 6,194,245. Applicants have copied claims from the Matsushita '348 patent in application no. 09/161,774 which Applicants understand has been forwarded to the Board for declaration of an interference. Claims from both the Tayanaka patents have been copied in the present application.


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TC 2800 MAIL ROOM

CONCLUSION

It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our address given below.

Respectfully submitted,


Attorney for Applicants

Registration No. 291767

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NY_Main241627 v1



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Foreign documents cited in Information Disclosure Statement dated September 5, 2002

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Other Publications cited in Information Disclosure Statement dated September 5, 2002

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PTO 1449 (modified)

ATTY DOCKET NO.

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APPLICATION NO.

10/085,046

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

APPLICANT

KIYOFUMI SAKAGUCHI, ET AL.

LIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

FILING DATE

March 1, 2002

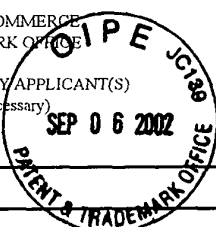
GROUP

2813

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4,116,751	09/26/78	Zaromb	156	600	
	4,727,047	02/23/88	Bozler, et al.	437	89	
	5,248,621	09/28/93	Sano	437	3	
	5,250,460	10/05/93	Yamagata, et al.	437	62	
	5,277,748	01/11/94	Sakaguchi, et al.	156	630	
	5,278,092	01/11/94	Sato	437	90	
	5,278,093	01/11/94	Yonehara	437	109	
	5,285,078	02/08/94	Mimura, et al.	257	3	
	5,290,712	03/01/94	Sato, et al.	437	24	
	5,320,907	06/14/94	Sato	428	446	
	5,331,180	07/19/94	Yamada, et al.	257	3	
	5,362,683	11/08/94	Takenaka et al.	437	226	
	5,363,793	11/15/94	Sato	117	2	
	5,371,037	12/06/94	Yonehara	437	86	
	5,374,564	12/20/94	Bruel	437	24	
	5,403,771	04/04/95	Nishida, et al.	437	89	
	5,433,168	07/18/95	Yonehara	117	90	
	5,453,394	09/26/95	Yonehara, et al.	437	62	
	5,457,058	10/10/95	Yonehara	437	24	
	5,459,081	10/17/95	Kajita	437	3	
	5,466,631	11/14/95	Ichikawa, et al.	437	62	
EXAMINER			DATE CONSIDERED			

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.
Include copy of this form with next communication to applicant.

U.S. DEPARTMENT OF COMMERCE
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,536,361	07/16/96	Kondo et al.	156	630.1	
		5,644,156	07/01/97	Suzuki, et al.	257	485	
		5,670,411	09/23/97	Yonchara, et al.	437	62	
		5,811,348	09/22/98	Matsushita, et al.	438	455	
		5,854,123	12/29/98	Sato, et al.	438	507	
		5,856,229	01/05/99	Sakaguchi, et al.	438	406	
		5,863,830	01/26/99	Bruel, et al.	438	478	
		5,869,387	02/09/99	Sato, et al.	438	459	
		5,970,361	10/19/99	Kumomi, et al.	438	409	
		5,980,633	11/09/99	Yamagata, et al.	117	94	
		6,103,598	08/15/00	Yamagata, et al.	438	459	
		6,107,213	08/22/00	Tayanaka	438	762	
		6,121,117	09/19/00	Sato, et al.	438	459	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO/ OR ABSTRACT
	EP	0417838 A1 ✓	09/06/90	EPO			
	EP	0469630 A2 ✓	02/05/92	EPO			
	EP	0499488 A2 ✓	02/14/92	EPO			
	EP	0536790 A2 ✓	04/14/93	EP			
	EP	0553852 A2 ✓	08/04/93	EPO			
	EP	0553859 A3 ✓	08/04/93	EPO			

EXAMINER

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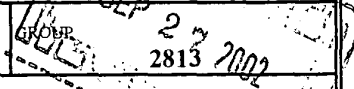
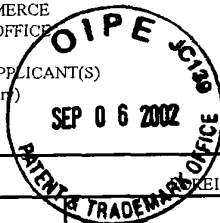
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	EP	0553860 A2 ✓	08/04/93	EPO			
	EP	0554795 A1 ✓	08/93	EPO			
	EP	0584777 A1 ✓	02/02/94	EPO			
	EP	0618624 A2 ✓	10/05/94	EPO			
	EP	0757377 A2 ✓	02/05/97	EPO			
	EP	0793263 A2 ✓	09/97	EPO			
	EP	0797258 A2 ✓	09/24/97	Europe			
	GB	2211991 A ✓	07/12/89	Great Britain			
	JP	60 196955A ✓	10/05/85	Japan			Abstract
	JP	62-108539 ✓	05/19/87	Japan			Abstract
	JP	62-279625 ✓	12/04/87	Japan			Part Tran.
	JP	03-70156 ✓	03/26/91	Japan			Abstract
	JP	05-211128 ✓	08/20/93	Japan			Abstract
	JP	05-283722 ✓	10/29/93	Japan			Translation
	JP	06-45622 ✓	02/18/94	Japan			Translation
	JP	07-79016 ✓	03/20/95	Japan			Abstract
	JP	07-211602 ✓	08/11/95	Japan			Abstract
	JP	07-302889 ✓	11/14/95	Japan			Abstract
	JP	07-326719 ✓	12/12/95	Japan			Abstract
EXAMINER				DATE CONSIDERED			

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PTO 1442 (modified)		ATTY DOCKET NO. 03500.010530.5		APPLICATION NO. 10/085,046	
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		<div style="position: relative; height: 100px;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 2px solid black; border-radius: 50%; text-align: center; color: white; font-weight: bold; font-size: 1.2em;"> OIPE JC136 SEP 06 2002 PATENT & TRADEMARK OFFICE </div> </div>			
LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)					
		APPLICANT KIYOFUMI SAKAGUCHI, ET AL.		FILING DATE March 1, 2002	
		GROUP 2813			
FOREIGN PATENT DOCUMENTS					
*EXAMINER INITIAL	JP	DOCUMENT NUMBER 9-162090	DATE 06/20/97	COUNTRY Japan	CLASS
					SUBCLASS
					TRANSLATION YES/NO/ OR ABSTRACT
	WO	92/09104	05/29/92	PCT	
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)					
	✓	T. Abe et al. "Silicon Kesshou to Doping (Silicon Crystal and Doping)", Maruzen Co., Ltd., 1986 (with partial translation)			
	✓	K. Barla, et al., "SOI Technology Using Buried Layers of Oxidized Porous Si", pp. 11-15 (1987)			
	✓	H. Baumgart, et al., "Light Scattering Topography Characterization Of Bonded SOI Wafers", Extended Abstracts, Elect. Chem. Soc. 1 st Symp., pp. 375-85 (1991)			
	✓	G.W. Cullen, ed., Journal of Crystal Growth, vol. 63, no. 3, pp. 429-590, Oct. 1993 (see p. 547.)			
	✓	Extended Abstracts (the 57 th Autumn Meeting, 1996); The Japan Society of Applied Physics (Abstr. 8a-V-8) (with translation)			
	✓	Extended Abstracts (The 44 th Spring Meeting, 1997); The Japan Society of Applied Physics and Related Societies (Abstr. 31a-B-5) (with translation)			
	✓	Extended Abstracts (The 59 th Autumn Meeting, 1998); The Japan Society of Applied Physics (Abstr. 15a-YB-4) (with translation)			
	✓	C. Harendt et al., "Silicon on Insulator material by Wafer Bonding," Journal of Materials, vol. 20, no. 3, pp. 267-77, March 1991.			
	✓	Y. Hashimoto, "Shin-Kagaku Yougo Jiten" (new chemical term dictionary), Sankyo Shuppan Co., Ltd., 6 th Edn (1973) (definition of anodic oxidation) (with translation)			
	✓	R.P. Holmstrom, "Complete dielectric isolation by highly selective and self-stopping formation of oxidized porous silicon," Applied Physics Letters, vol. 42, no. 4, pp. 386-88, Feb. 1983.			
	✓	C.E. Hunt, et al., "Thinning of Bonded Waters: Etch-Stop Approaches", Extended Abstracts, Elect. Chem. Soc. 1 st Symp., pp. 165-73 (1991)			
	✓	K. Imai, "A New Dielectric Isolation Method Using Porous Silicon," Solid State Electronics, vol. 24, pp. 159-64, 1981.			
	✓	K. Imai et al., "Crystalline Quality of Silicon Layer Formed by FIPOS Technology," J. of Crystal Growth 63, 547-553 (1983)			
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO 1449 (modified)		ATTY DOCKET NO. 03500.010530.5	APPLICATION NO. 10/085,046
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		APPLICANT KIYOFUMI SAKAGUCHI, ET AL.	
LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)		FILING DATE March 1, 2002	GROUP 2813
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)			
<input checked="" type="checkbox"/>	T. Ito et al. "Porous Silicon Crystal Prepared by Anodization", <u>Applied Physics</u> (Japanese) vol. 57 no. 11 (1988) (no translation)		
<input checked="" type="checkbox"/>	V. Labunov, "Heat Treatment Effect on Porous Silicon," <u>Thin Solid Films</u> , 137 (1986) 123-134		
<input checked="" type="checkbox"/>	W.P. Maszara, "Silicon-On-Insulator by Wafer Bonding: A Review", J. Electrochem. Soc., vol. 138, No. 1, pp. 340-47 (1991)		
<input checked="" type="checkbox"/>	Kazutoshi Nagano, et al., "Oxidized Porous Silicon and It's Application", Semiconductor Research Lab Matsushita Electric Industrial Co., Ltd. (no translation)		
<input checked="" type="checkbox"/>	Nikkei Microdevice, pp. 76-77 (1994) (with translation)		
<input checked="" type="checkbox"/>	K. Ogasawara, et al., "Enhancement of Electroluminescence from n-Type Porous Silicon and Its Photoelectrochemical Behavior", J. Electrochem. Soc., vol. 142, no. 6, pp.1874-79 (1995)		
<input checked="" type="checkbox"/>	M. Ohnishi, et al., "New Type Structures Of A-Si Solar Cell Submodules Fabricated By Microscopic Hole Spacing Technique", Record of the Photovoltaic Specialist Conference, Kissimimee, May 21-25, 1990, vol. 2, No. Conf. 21, pp. 1394-1399, May 21, 1990.		
<input checked="" type="checkbox"/>	Patent Abstracts of Japan, vol. 18, No. 066 (E-1501), Feb. 3, 1994.		
<input checked="" type="checkbox"/>	V. Raineri, et al., "Silicon-on-insulator produced by helium implantation and thermal oxidation", Appl. Phys. Lett. 66(26), 3653-3656 (June 1995)		
<input checked="" type="checkbox"/>	Sato, Extended Abstracts, <u>Elect. Chem. Soc.</u> , vol. 94-1, pp. 705-06 (1994).		
<input checked="" type="checkbox"/>	H. Tayanaka, et al., "Thin-Film Crystalline Silicon Solar Cells Obtained by Separation of a Porous Silicon Sacrificial Layer" 2d World Conf. and Exhibition on Photovoltaic Solar Energy Conversion (1998)		
<input checked="" type="checkbox"/>	T. Unagami, "Formation Mechanism of Porous Silicon Layer by Anodization in HF Solution," Journal of the Electrochemical Society, vol. 127, no. 2, pp. 476-83, Feb. 1980.		
<input checked="" type="checkbox"/>	A. Uhler, Jr., "Electrolytic Shaping of Geranium and Silicon," The Bell System Technical Journal, vol. XXXV, pp. 333-47, Mar. 1956.		
<input checked="" type="checkbox"/>	A. Van Veen, et al., "Helium-Induced Porous Layer Formation In Silicon", Mat. Res. Soc. Symp. Proc. vol. 107, pp. 449-54 (1988)		
<input checked="" type="checkbox"/>	T. Yasumata, et al., "Ultrathin Si films grown expitaxially on porous silicon", Applied Surface Science, vol. 48/49, pp. 414-18, May 1991.		
<input checked="" type="checkbox"/>	T. Yonehara et al., "Epitaxial layer transfer by bond and etch back of porous Si", <u>Appl. Phys. Lett.</u> 64(16), 2108-2110 (1994)		
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Sheet 5 of 5